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ESTIMATED COSTS FOR NEW CONSTRUCTION AND
REHABILITATION OF EXISTING RESIDENTIAL STRUCTURES

CRP

SAN FRANCISCO COMMUNITY RENEWAL PROGRAM

TECHNICAL PAPER NUMBER 4

DOCUMENTS

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SAN FRANCISCO COMMUNITY RENEWAL PROGRAM

ESTIMATED COSTS FOR NEW
CONSTRUCTION AND REHABILITATION
OF EXISTING RESIDENTIAL STRUCTURES

Technical Paper Number 4

(A Special Study Undertaken

by

Mr. Roger Malek, A.I.A.)

The preparation of this report was financed in part through a Community Renewal Program Grant from the United States Housing and Home Finance Agency under the provisions of Section 405 of the Housing Act of 1959

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PREFACE

This report summarizes the results of a special study undertaken by Mr. Roger Malek, special architectural consultant to Arthur D. Little, Inc., of the pattern of residential costs for the year 1964--both for new construction and rehabilitation of existing structures in San Francisco. The purpose of the study was to provide direct data inputs for the Community Renewal Program mathematical simulation model and to assist in developing alternative policies and programs for housing and renewal in San Francisco.

The report is divided into two parts: Part One describes new construction costs by estimating the current average costs per square foot times an average area for each dwelling unit type. Part Two defines the condition classes of a structure to be rehabilitated by choosing a configuration of the kind and quantity of work done and describes cost as a detailed estimation of these condition configurations. A detailed description of the assumptions, limitations and techniques used is to be found in the separate introductions to Parts One and Two.

It should be emphasized that the figures presented in this report represent only a generalized and schematic pattern of costs; they must be modified for any specific building, project, or project area by a prior field survey which would define the precise extent and scope of the work required.

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PART ONE: ESTIMATED COSTS FOR NEW CONSTRUCTION

INTRODUCTION

In estimating new construction costs, housing units were classified by an assumed average size, i.e., the number of rooms per unit. In the room size classification, bathrooms were not counted as rooms, but were included as part of the costs.

EXPLANATION OF THE TABLES

Table A: Room and Building Factor Areas lists a minimum and mode figure for areas, room by room. The areas are based upon average usage in three categories: Single Family, Type V-N (no HR fire rating) and Type V 1-HR (fire rated) wood construction apartments; and Type I (Hi-Rise construction) apartments. Included in the table is space for closet, storage and utility areas and internal circulation, hallways. The area for each unit was compiled by adding the appropriate room areas from the table. To each unit the following factors were added: 1) An area for parking one car, including driveway, was estimated at 280 sq. ft. This area includes 140 sq. ft. of area for exterior space of garage, deck and utility area. This space is usually computed at one-half of the total; 2) Decks were taken at average sizes and reduced by a factor which represents probable occurrence and taken at one-half areas as in parking above; 3) A square footage factor was assumed for each unit which represents Building Lobby, Circulation, Utility and Mechanical Spaces. The "Adjusted Square Footage" in Tables B through H inclusive includes therefore not only the square footage of the unit but the square footage of additional building spaces required to support that unit.

Tables B through H inclusive: Cost per unit by building type accumulates for each building type the different unit sizes and costs per square foot with the minimum and reasonable maximum cost per unit. To this, an increase of 20 percent representing a difficult site is added to the basic cost. This cost is an assumed average for building on steep topography, odd-shaped lots, demolition as required, etc. For Hi-Rise units this cost is reduced to 10 percent. Unit sizes that are dashed are assumed to occur infrequently enough to not warrant inclusion. The costs per square foot for each type of construction are based on current schematic estimating costs; they are average in nature and do not account for every possible exception.

The variations downward in cost per square foot as the number of units increases, do not always occur depending on a variety of factors: the basic structural design of the building, the shape of the lot, etc. Cost savings in appliances and materials due to bulk purchases are offset in such buildings frequently by the additional requirements of the Fire and Building Codes.

Table I: This table summarizes unit costs by Building Size and Unit Size for flat topography and for difficult site development, including building factors. A and B represent the unit size variation that occurs in the Room Size Category. The final unit costs were modified by a factor which was arrived at by the following procedure: Unit costs of specific examples in the current market were compared to the Minimum and Reasonable Maximum and a factor was assigned which adjusted the costs accordingly. For absolute minimum cost of single family residential units refer to Table B. This is considered to be only a temporary expedient for weighting the costs appropriately.

TABLE A: ROOM AND BUILDING FACTOR AREAS, IN SQUARE FEET

R O O M S			TYPICAL APARTMENT TYPE V-1 HR		SINGLE FAMILY TYPE V N	LUXURY APARTMENT HI RISE TYPE	
			Min.	Mode	Mode	Min.	Mode
LIVING ROOM		1	192	250	300	230	250
STUDIO LIVING ROOM			150*	220	-	250	250
DINING ROOM		2	60	80	180	100	180
BEDROOM	a. Master	3	120	140	200	140	200
	b. Secondary		100*	120	130	110	130
KITCHEN	a. Kitchen	4	50*	80	120	64	120
	b. Studio- Kitchenette		16	16	-	16	16
BATH	a. Master	5	35	40	50	40	60
	b. Secondary		35	40	40	35	40
	c. Dressing Rm.		-	-	40	20	50
UTILITY/CLOSET/STORAGE		6					
	a. 1 BR.		25	50	80	24	60
1.Studio(16)	b. 2 BR.		30	60	100	36	75
	c. 3 BR.		35	70	120	48	95
	d. 4 BR.		-	-	140	75	120
INTERNAL CIRCULATION		7					
	a. 1 BR.		30	60	120	50	120
	b. 2 BR.		40	70	140	75	140
1.Studio(24)	c. 3 BR.		60	90	200	140	200
	d. 4 BR.		-	-	250	175	250
*Refers to S.F. Code Minimums			- Does not Apply				
ADDITIVE FACTORS			C.C. = Construction Cost				
			Occur.Med. = Occurrence of Median				
AUTOMOBILE/UNIT		8	280 @ ½ C.C. = 140 /Unit				
DECKS	a. SF Type V	9	60 - 140 /unit @ 75% Occur. Med. = 75 @ ½ C.C. = 37.5				
	b. Type V Apts. & Duplex		50 - 90 /unit @ 50% Occur. Med. = 35 @ ½ C.C. = 17.5				
	c. Type I Apts.		60 - 120 /unit @ 50% Occur. Med. = 45 @ ½ C.C. = 22.5				
BUILDING CIRCULATION, LOBBY, UTILITY, MECHANICAL		10	a. Duplex 80 b. Type V Apts. 120 @ ½ C.C. Ext. Access = 60 c. Type I Apts. 110				

TABLE B: COST PER UNIT - SINGLE FAMILY RESIDENCE

UNIT SIZE	ROOM SIZE CATEGORY	(+ Auto, Deck) ADJUSTED SQ. FT.			COST/SQ.FT.		COST/UNIT		20% Increase DIFFICULT SITE	
		Min.	Mode		Min.	Reas. Max.	Min.	Reas. Max.	Min.	Reas. Max.
STUDIO 1 RM	1-2	A	-	-	-	-	-	-	-	-
STUDIO 2 RM	1-2	B	-	-	-	-	-	-	-	-
1BR-K-LR	3-4	A	-	1028	\$15	\$25	15,400	25,600	18,500	30,800
2BR-K-LR	3-4	B	-	1438	\$15	\$25	21,600	36,000	25,900	43,000
3BR-K-LR	5-6	A	-	1968	\$14	\$24	27,600	47,200	33,000	56,600
4BR-K-LR or 3BR-DR-K-LR	5-6	B	-	2218	\$14	\$24	31,000	53,000	37,200	63,600
4BR-DR-K-LR	7+	A	-	2438	\$14	\$24	34,000	58,400	40,750	70,000
5BR-DR-K-LR	7+	B	-	2568	\$14	\$24	36,000	61,600	43,200	84,000
ADDITIONAL RMS.	7+	C					72,000	123,200	86,400	168,000

1BR - 1 Bath
 2BR - 2 Baths
 3BR - 2 Baths; 2 x Parking, DR
 4BR(7+) - 3 Baths; 2 x Parking, DR

TABLE C: COST PER UNIT - DUPLEX

UNIT SIZE	ROOM SIZE CATEGORY	(+ Auto, Circ., Deck) ADJUSTED SQ.FT.		COST/SQ.FT.		COST/UNIT		20% Increase DIFFICULT SITE	
		Min.	Mode	Min.	Reas.Max.	Min.	Reas. Max.	Min.	Reas.Max.
STUDIO 1 RM	1-2	-	-	-	-	-	-	-	-
STUDIO 2 RM	1-2	-	-	-	-	-	-	-	-
1BR-K-LR	3-4	670	838	\$15	\$18	10,000	15,600	12,000	18,700
2BR-K-LR	3-4	685	978	\$15	\$18	14,600	17,600	17,500	21,000
3BR-K-LR	5-6	845	1,168	\$15	\$18	15,900	19,100	19,100	23,000
4BR-K-LR or 3BR-K-LR-DR	5-6	905	1,248	\$15	\$18	18,700	22,500	22,400	27,000
4BR-DR-LR-K	7+	-	-	-	-	-	-	-	-
5BR-DR-LR-K	7+	-	-	-	-	-	-	-	-

TABLE D: COST PER UNIT - 3-4 UNITS/TYPE V - 1 HR

UNIT SIZE	ROOM SIZE CATEGORY	(+ Auto, Circ., Deck) ADJUSTED SQ. FT.		COST/SQ. FT.		COST/UNIT		20% Increase DIFFICULT SITE	
		Min.	Mode	Min.	Reas.Max.	Min.	Reas.Max.	Min.	Reas.Max.
STUDIO 1 RM	1-2 A	443	518	\$14	\$16	7,250	8,300	8,700	9,950
STUDIO 2 RM	1-2 B	459	534	\$14	\$16	7,450	8,550	8,950	10,200
1BR-K-1R	3-4 A	670	838	\$14	\$16	9,400	13,400	11,300	16,100
2BR-K-1R	3-4 B	685	978	\$14	\$16	9,600	15,600	11,500	18,700
3BR-K-1R	5-6 A	845	1,168	\$14	\$16	11,800	18,700	14,200	22,400
4BR-K-1R or 3BR-DR-K-1R	5-6 B	905	1,248	\$14	\$16	12,700	20,000	15,200	24,000
4BR-DR-LR-K	7+	-	-	-	-	-	-	-	-
5BR-DR-LR-K	7+	-	-	-	-	-	-	-	-

TABLE E: COST PER UNIT - 5-10 UNITS/TYPE V - 1 HR

UNIT SIZE	ROOM SIZE CATEGORY	(Auto, Circ., Deck) ADJUSTED SQ. FT.			COST/SQ. FT.			COST/UNIT			20% Increase DIFFICULT SITE		
		Min.	Mode	Reas.	Min.	Reas.	Max.	Min.	Reas.	Max.	Min.	Reas.	Max.
STUDIO 1 RM	1-2 A	443	518	\$14	\$16	\$16		6,200	8,300		7,450	9,950	
STUDIO 2 RM	1-2 B	459	534	\$14	\$16	\$16		6,400	8,550		7,700	10,500	
1BR-K-LR	3-4 A	670	838	\$14	\$16	\$16		9,400	13,400		11,300	11,500	
2BR-K-LR	3-4 B	685	978	\$14	\$16	\$16		9,600	15,700		15,200	18,840	
3BR-K-LR	5-6 A	845	1,168	\$14	\$16	\$16		11,800	18,700		14,160	22,440	
4BR-K-LR or 3BR-DR-K-LR	5-6 B	905	1,248	\$14	\$16	\$16		12,700	20,000		15,240	24,000	
4BR-DR-LR-K	7+	-	-	-	-	-		-	-		-	-	
5BR-DR-LR-K	7+	-	-	-	-	-		-	-		-	-	

TABLE F: COST PER UNIT - 10-20 UNITS, TYPE V - 1 HR

UNIT SIZE	ROOM SIZE CATEGORY	(+Bldg., Auto, Deck) ADJUSTED SQ. FT.		COST/SQ. FT.		COST/UNIT		20% Increase DIFFICULT SITE	
		Min.	Mode	Min.	Reas. Max.	Min.	Reas. Max.	Min.	Reas. Max.
STUDIO 1 RM	1-2 A	443	518	\$13	\$15	5,760	7,660	6,910	9,190
STUDIO 2 RM	1-2 B	459	534	\$13	\$15	5,960	8,010	7,150	9,610
1BR-K-LR	3-4 A	670	838	\$13	\$15	8,710	12,570	10,450	15,084
2BR-K-LR	3-4 B	685	978	\$13	\$15	8,900	14,670	10,680	17,600
3BR-K-LR	5-6 A	845	1,168	\$13	\$15	10,980	17,520	13,170	21,000
4BR-K-LR or 3BR-DR-K-LR	5-6 B	905	1,248	\$13	\$15	11,760	18,720	14,112	22,460
4BR-DR-LR-K	7+	-	-	-	-	-	-	-	-
5BR-DR-LR-K	7+	-	-	-	-	-	-	-	-

TABLE G: COST PER UNIT - 20+ UNITS - TYPE V - 1 HR

UNIT SIZE	ROOM SIZE CATEGORY	(+Auto,Circ.,Deck) ADJUSTED SQ. FT.		COST/SQ.FT.		COST/UNIT		20% Increase DIFFICULT SITE	
		Min.	Mode	Min.	Reas.Max.	Min.	Reas.Max.	Min.	Reas.Max.
STUDIO 1 RM	1-2 A	443	518	\$12	\$15	5,310	7,770	6,370	9,320
STUDIO 2 RM	1-2 B	459	534	\$12	\$15	5,500	8,010	6,600	9,610
1BR-K-LR	3-4 A	670	838	\$12	\$15	8,040	12,570	9,650	15,080
2BR-K-LR	3-4 B	685	978	\$12	\$15	8,720	14,670	9,860	17,600
3BR-K-LR	5-6 A	845	1,168	\$12	\$15	10,140	17,520	12,168	21,000
4BR-K-LR or 3BR-DR-K-LR	5-6 B	905	1,248	\$12	\$15	10,860	18,720	13,030	22,460
	7+	-	-	-	-	-	-	-	-
	7+	-	-	-	-	-	-	-	-

TABLE H: COST PER UNIT - 20+ UNITS, TYPE I, HI-RISE

UNIT SIZE	ROOM SIZE CATEGORY	(+Auto, Circ., Deck) ADJUSTED SQ. FT.		COST/SQ. FT.		COST/UNIT		10% Increase DIFFICULT SITE	
		Min.	Mode	Min.	Reas. Max.	Min.	Reas. Max.	Min.	Reas. Max.
STUDIO 1 RM	1-2	-	-	-	-	-	-	-	-
STUDIO 2 RM	1-2	623	623	\$18	\$25	11,214	15,570	12,320	17,130
1BR-K-LR	3-4	821	1,083	\$18	\$25	14,770	27,075	16,250	29,780
2BR-K-LR	3-4	1,003	1,288	\$18	\$25	18,050	32,200	19,850	35,420
3BR-K-LR	5-6	1,245	1,548	\$18	\$25	22,410	38,700	24,640	42,570
4BR-K-LR or 3BR-DR-LR-K	5-6	1,417	1,763	\$18	\$25	25,500	44,000	28,050	48,400
4BR-DR-LR-K	7+	1,617	2,163	\$18	\$25	29,100	54,000	32,010	59,400
5BR-DR-LR-K	7+	1,817	2,563	\$18	\$25	32,700	64,075	35,970	70,840

2BR - 2 Baths
3 BR - 3 Baths - DR

TABLE 1: SUMMARY OF UNIT COSTS BY ASSUMED WEIGHTS

BLDG. SIZE	WT.	SITE	C O S T P E R U N I T									
			1 - 2		3 - 4		5 - 6		7+			
			A	B	A	B	A	B	A	B	C	
S.F.	1.33 x min.	Flat	-	-	20,480	28,700	36,700	41,230	45,220	47,880	95,760	
		Diff	-	-	24,600	34,500	43,890	49,480	54,200	57,460	114,900	
DUPLEX	Take Reas. Max.	Flat	-	-	15,600	18,700	19,100	23,000	-	-	-	
		Diff	-	-	17,600	21,000	22,500	27,000	-	-	-	
3-4	Studio Max. 3-4 %33 Min. 5-6 %53 Min.	Flat	8,300	8,550	12,500	12,780	15,600	16,890	-	-	-	
		Diff	8,950	10,200	15,030	15,290	18,890	20,210	-	-	-	
5-10	↓	Flat	8,300	8,550	12,500	12,780	15,690	16,890	-	-	-	
		Diff	9,950	10,200	15,030	15,290	18,890	20,210	-	-	-	
10-20	↓	Flat	7,660	8,010	11,580	11,840	14,600	15,640	-	-	-	
		Diff	9,190	9,610	13,900	14,200	17,500	18,770	-	-	-	
20+	↓	Flat	7,770	8,010	10,690	10,930	13,480	14,450	-	-	-	
		Diff	9,320	9,610	12,830	13,110	16,180	17,330	-	-	-	
20+	Studio Max. 1.5 Min.	Flat	-	15,570	22,150	27,750	33,600	38,250	43,650	49,050	-	
		Diff	-	17,130	24,370	29,770	36,960	42,075	48,020	53,950	-	

TYPE V-1 HR
TYPE V-1
TYPE V-N

PART TWO: ESTIMATED COSTS FOR REHABILITATION, MERGERS AND ADDING ONE
HOUSING UNIT TO AN EXISTING STRUCTURE

INTRODUCTION

In this section a system or method is presented for estimating the pattern of rehabilitation costs in San Francisco as they vary with building size, unit size and condition. As developed, this system can be easily extended, revised and combined in numerous ways to fit any conditions which might be found in a field survey. It is easily adaptable to a field survey check list procedure that would help perfect the definition of condition and arrive at costs of considerable refinement.

The cost module suggested herein is a simple additive system which divides the rehabilitation process into units of work with, an installed cost for, each unit. The units of work are summed into a cost per room for three different cost categories. The rooms are summed as dwelling units from configurations that define the condition class: and, exterior rehabilitation factors, based on building size are added to the dwelling unit sums. All totals given in the summary tables are for a single dwelling unit. To arrive at a cost per building or a cost per project area, the additive process can be extended by a simple multiplication. It is also possible to add as separate aggregates those costs which are peculiar to a particular project or area. The summarized costs can be interpolated for any year by applying a consistent Construction Cost Index. It is advisable not to do this with the unit costs.

The costs presented in this paper and the system developed for estimating costs, cover only certain types of physical changes to an existing residential structure. These include: (1) rehabilitation, which involves the replacement and/or repair of components of an existing structure - it does not include alterations or additions, e.g. construction of an additional room or major change in the existing plan of the structure; (2) merger, which involves the creation of 1 housing unit out of 2 existing units - this usually occurs as a consequence of city code enforcement activity where the objective is to eliminate illegally converted units; (3) adding 1 unit, which involves the creation of an additional housing unit in an existing structure by reducing the size of existing units, or by subdivision - as opposed to adding on a unit to the structure.

DATA SOURCES

The sources of data for installed unit costs were as follows:

1. Numerous telephone calls to subcontractors in San Francisco and material suppliers in the Bay Area.
2. Conversations with estimators of some general contracting firms doing rehabilitation work.
3. Data from the quarterly publication of materials and certain installation prices for the San Francisco Bay Area in the Architectural Record. These costs are primarily for new construction and were, therefore used sparingly and with caution.

It must be pointed out that various factors affect the accuracy of the unit prices quoted, including the special conditions of any specific project, the market-bidding process, a graphic definition of the work and the competitive incentive, and the difficulty of arriving at specific labor, profit and overhead quantities. Furthermore, many subcontractors are hesitant to give estimations unless they have an immediate prospect of obtaining the work; and even when the estimations are given, they are not necessarily accurate. Also, unit prices vary with the quantity of work done, and when there is a smaller scope of rehabilitation work there is considerable variation. Finally, certain subcontractors and general contractors differ in the quality of work that they do, with a consequent difference in the cost of doing business and therefore unit price estimations.

In the case of electrical, plumbing and heating costs an estimation of the extent of repair, work done and the standards used was necessary prior to the application of unit prices. The cost of this work is more difficult to estimate with precision because of the variety of possible states of disrepair than materials costs which are wholly dependent upon the geometry of the room sizes.

An attempt was made to balance the various sources of data, one against the other. The results should be considered reasonable but not absolute.

FACTORS THAT AFFECT THE COSTS

The following factors affect construction costs and in applying the Cost Module to a particular case one should assess their impact and compare the assumptions contained in this paper with the facts of the particular case being considered.

Factors Affecting the Cost

Assumptions Made in This Paper

- | | |
|--------------------------------|---|
| 1. Variations in room geometry | Rectangular rooms of the sizes stated in tables which follow. |
|--------------------------------|---|

Factors Affecting the Cost

Assumptions Made in This Paper

- | | |
|---|--|
| 2. Variations in quantity of work done | See Cost Configuration Tables 2A, 2B...and room size assumptions. |
| 3. Variations in quality of work done. | See definitions of the three types of cost. |
| 4. Variations in the manner of doing work. | See definitions of the three types of cost and all tables for the cost variations. |
| 5. Variations in condition at beginning and end of work. | See Cost Configuration Tables, 2A, 2B...and definition of condition classes. |
| 6. State of the competitive market at the time and place of estimation. | Prices are for San Francisco, Fall 1964. |

DEFINITION OF CONDITION CLASSES

The housing condition classes were defined indirectly by assuming configurations of the type and quantity of work done on a dwelling unit. This data is specified by Items of Work done, coupled with a verbal description of the scope of the work, in Tables 2A, 2B... A comparison is made below of the definitions of the condition classes used in the overall CRP with those used in this paper.

CONDITION DEFINITIONS USED IN THIS PAPER

CRP DEFINITIONS

- | | |
|---|---|
| 1. The state resulting from the work accomplished. A market-oriented condition. The best condition possible for the dwelling unit given the scope of the work and normal code enforcement. It should be realized that Condition 1 is not identical from structure to structure, but varies with age, project area and original condition state. | A market - oriented condition assuming normal code enforcement. |
| 2. The work accomplished in Configuration One. Painting and minor repairs. | Sound, all facilities, minor repairs |
| 3. The work accomplished in Configuration Two. Patching, painting, minor replacement and more extensive repairs. Moderate electrical work, some new kitchen appliances and new kitchen cabinets. | Deteriorated, minor alterations. Deteriorated lacking 1 facility. |

CONDITION DEFINITIONS USED IN THIS PAPER

CRP DEFINITIONS

4. Painting, extensive interior repairs, bathroom and kitchen replacement, considerable electrical work, some heating repair and replacement.

Deteriorated, lacking 2 or more facilities
Dilapidation.

These condition classes can be redefined by forming new configurations. If the results of field spot checks or surveys indicate that other configurations would be more plausible in certain project areas this can be accomplished by regrouping the items of work from Tables 1A, 1B... If units of work arise which are not accounted for by these tables the tables can be easily extended. As a result, future states of the housing stock and unforeseen technical innovations in construction can be accommodated within the framework of the system.

DEFINITION OF THE THREE TYPES OF COST

For each item of work three separate costs, as defined below, were estimated.

DYS	-	"DO-IT-YOURSELF"	- In this category it was assumed that the Owner performed the work of rehabilitation by himself, with minimal extra low cost labor. The owner purchased the materials. The cost of these materials were estimated low because it was assumed the owner would purchase "second-hand" and "discount house" items. It was assumed that the owner did not do his own electrical work.
CONTR MIN	-	GENERAL CONTRACTOR MINIMUM COST	This category of cost assumes either a highly competitive market or a slightly more restrictive scope of work and always a lower quality of material and workmanship.
CONTR MAX	-	GENERAL CONTRACTOR MAXIMUM COSTS	This category of cost assumes either a very non-competitive market or a scope of work which includes "amenities" considered essential in middle income brackets and always a

CONTR MAX (Cont'd) - GENERAL CONTRACTOR
 MAXIMUM COSTS

higher quality of material and workmanship. Although this cost is called Maximum it should be pointed out that it is only a "reasonable maximum". In areas of "conspicuous consumption" or luxurious standards the cost, for instance, of the kitchen or bathroom could easily increase 100%.

Although the prices in the attached tables are stated as fixed sums it should be noted that in the real world actual quality standards fluctuate slightly as the state of the market changes, or vice versa. Therefore, in estimating costs of any specific project, consideration should be given to the state of the market at that particular time, and the fixed prices adjusted accordingly. The following variations from the costs given can be expected in each of the Contractor Minimum and Contractor Maximum categories:

<u>COST CATEGORY GIVEN</u>	<u>STATE OF MARKET</u>	<u>QUALITY OR SCOPE OF JOB</u>	<u>ACCURACY OF PRICE</u>
MIN	HIGHLY COMPETITIVE MARKET	LOW QUALITY INST- ALLATION OR SMALL SCOPE OF WORK	FAIR
MAX	HIGHLY COMPETITIVE MARKET	HIGH QUALITY INST- ALLATION OR LARGER SCOPE OF WORK	GOOD
MIN	NON-COMPETITIVE MARKET	LOW QUALITY INST- ALLATION OR SMALL SCOPE OF WORK	BAD
MAX	NON-COMPETITIVE MARKET	HIGH QUALITY INST- ALLATION OR LARGER SCOPE OF WORK	FAIR

In the smaller construction contracts the work is less profitable, the cost of doing business is accordingly higher; and in the case of work of low quality there is little achievement incentive. As the construction becomes either larger in scope or higher in quality the total cost of the contract increases, the cost of doing business is less; and in the case of high quality work the achievement incentive is high. Therefore, even in a non-competitive market the large scope, high quality job will usually achieve a lower cost for work done because of its higher desirability.

EXPLANATION OF THE TABLES

Tables 1A, 1B, 1C....

These tables contain the costs of separate units of work in room-by-room categories. Each room has a separate capital letter symbol to which the item number is linked. All items of work are separated into "trade" categories and each item is verbally described. Each room has an assumed room dimension and square footage size. These sizes are assumed to be average for San Francisco. All unit costs were applied to the quantities derived from these assumed room sizes. Therefore, any detailed application of these costs to a particular structure would require adjustment of these quantities. For each item of work three costs are given, DYS, CONTR MIN, CONTR MAX. The prices given include labor, material and subcontractor profit and overhead where applicable. These units of cost form the building blocks of the cost module. The units can be extended in scope to allow the formation of all possible combinations. These tables could readily be adapted to a checklist form which would allow rapid and detailed field estimations.

Tables 2A, 2B, 2C....

In these tables four different configurations of the units of work were selected from Tables, 1A, 1B, 1C... and used to indirectly define the condition class of the building prior to rehabilitation. (See definition of the Condition Classes above.) These configurations were selected to give a gradation of the kinds of work accomplished in rehabilitation that would approximate the CRP condition classes. The configurations are summed (see EXAMPLE: REHABILITATION COSTS) and a room cost per configuration for the three categories, DYS, CONTR MIN, CONTR MAX is given. In the categories CONTR MIN and CONTR MAX, 20% for General Contractor's profit and overhead was added to each cost. A verbal description of the work done is given with the Units of Work choices. These choices simulate the kinds of actual choices that are made in rehabilitation work.

Tables 3A, 3B, 3C....

These tables give a cost per square foot per room for each configuration of work and for the three types of cost, DYS, CONTR MIN, CONTR MAX. These costs are valuable in comparing the relationships of cost to rehabilitate different kinds of rooms and different scopes of work. The costs are based on the assumptions of the configurations. With these square footage costs it is possible, within + 10 SQ FT for bathrooms, + 40 SQ FT for kitchens and + 60 SQ FT for other rooms, to estimate the cost of larger room sizes without recomputing the Unit of Work costs. The costs for kitchenettes in 1-2 room units, as shown in Table 3B1, were estimated in this way.

Table 3C contains an additive factor for the cost of rehabilitating the exterior per unit. This cost is valuable in that the number of units per building can be summed and the total cost of rehabilitation for both interior and exterior is thereby given. The limitation in applying this factor is that a building size must be assumed prior to arriving at the factor. In the 2-4 unit per dwelling category the four-unit building was taken as the base and in the 5+ unit per dwelling category the 15-unit building was taken as base. New tables can be created by simply assuming different building sizes, summing the cost, and dividing by the building size. Field inspection of the actual frequency of building sizes in each project area might produce different assumptions for each project area and consequently a different exterior unit factor. Fire escapes, fire alarm systems, etc. were not added into the configurations for exterior rehabilitation and should be added as a lump sum for each project area, see EXAMPLE: ADD 1 UNIT, Step 3.

Table 4A

Table 4A contains a cost figure for demolition and structural changes required in subdividing existing spaces to construct a new unit in a building or to merge two existing units. The extent of partition, demolition and replacement was estimated by square footage assumptions for each unit size and each type of cost category. A note to Table 4A provides a cost for adding an exterior physical frame of one room to provide sufficient space for the new unit. For application of this cost see EXAMPLE: ADD 1 UNIT, Step 2.

Tables 5A, 5B, 5C....

These tables contain the final summaries of costs by Building Size, Unit Size, and Condition Classification for each type of cost category, DYS, CONTR MIN, CONTR MAX. The costs are summarized for Rehabilitation Work, The Cost of Adding One Unit, and the cost of Merging and Rehabilitating Two Units. The contents of each of the tables are explained separately below:

Table 5A Summary Table of Rehabilitation Costs Per Unit

This table summarizes all costs included in rehabilitating dwellings from conditions 2, 3 and 4 to condition 1.

Table 5B: Summary Table of Costs of Adding 1 Unit

This table summarizes the costs of adding one unit to Single Family, 2-4 Family or 5 plus Family dwellings from conditions 2, 3 or 4 to condition 1.

Table 5C: Summary Table for Transformation of Building Types by
Adding 1 Unit

This table with supporting notes, defines the building size transformations which are a consequence of adding 1 unit to an existing structure. The notes provide data for adding separate prices for aggregates of exterior work that will vary from project area to project area. In the transformation from SF and duplex to 3+ units extra costs for code and fire protection requirements must be added to the total dwelling unit cost. In adding 1 unit to small sized structures it is frequently necessary to add a cost for minor additions to the structure. (See EXAMPLE: ADD 1 UNIT Step 2 and Step 3 for the methods of computation.)

Table 5D: Summary Table of Merger and Rehabilitation Costs

This table, with supporting notes, defines the criteria and summarizes the costs for merging units from conditions 2, 3 and 4 to condition 1.

Table 5E: Summary Table for Transformation of Building Types by Merging
One or More Units

This table contains the most probable building size and dwelling unit size transformations for merging two units. The assumptions used in merging the units are listed below table 5E as notes a, b, etc.

SAMPLE COMPUTATIONS

1. EXAMPLE: REHABILITATION COSTS

Problem

Find the cost of rehabilitating a FOUR ROOM UNIT in a 2-4 UNIT BUILDING from housing CONDITION THREE to CONDITION ONE.

Step 1 - Tabulate and sum the units of work for each room.

BATHROOM

<u>\$ Cost/Unit Of Work</u> <u>(Table 1A)</u>			<u>Configuration (de-</u> <u>fined in Table 2A)</u>	<u>Description of Unit</u> <u>of Work (Table 1A)</u>
<u>DYS</u>	<u>MIN</u>	<u>MAX</u>		
18	30	40	B3	New Door, Hardware, Trim
5	10	15	B5	Retain old Window, New trim
15	25	35	B10	New Sheet vinyl Floor
25	25	80	B15	New Medicine Cabinet
5	5	8	B17	New Paper Holder
9	9	9	B18	New Soap & Grab
8	8	8	B19	New Towel Bar
10	8	8	B21	New Curtain Rod
-	20	40	B24	Installation of accessories
4	60	85	B26	New 2 coats Paint & Patch
20	20	20	B30B	Repair Watercloset
35	35	35	B31B	Repair Lavatory
45	45	45	B32B	Repair Tub
15	15	20	B35	1 new duplex outlet
20	25	40	B36	1 new light outlet & fixture
15	15	20	B37	1 new light switch
249	355	508	totals rounded-off	
250	355	500	Table 2A	
-	70	100	Add General Contractor's Profit & Overhead, Table 2A	
\$250	\$425	\$600	Total for Bathroom, Table 2A	

Step 2 - Sum Rooms/Unit by number and type, plus factor for exterior work.

Definition of 4 Room Unit, Table 5A: B-2BR-K-LR (3-4)

Table	Room	Total Cost/Room (\$)		
		DYS	MIN	MAX
2A Config 2	BATHROOM	\$ 250	\$ 425	\$ 600
2E Config 2	2 x BEDROOM	170	600	740
2B Config 2	KITCHEN	640	1860	2730
2C Config 2	* LIVING ROOM	85	350	410
2F Config 2	HALLS, UTILITY	90	224	288
3G Config (2-4)	EXTERIOR FACTOR	<u>215</u>	<u>680</u>	<u>1170</u>
Table 5A, TOTAL COST/UNIT		\$1450	\$4139	\$5938

*Note that for Hall, Storage, Utility there are two costs for each category. Category (a) is to be used in the case of a 3-4 room unit. Category (b) is to be used in the case of 5-6 room unit or a 3-4 Single Family Residence. The 1-2 Room units have no additive factors for Halls, Storage & Utility

Step 3 - Total cost of rehabilitation for a specific project area by field check or estimation, firecode and miscellaneous exterior requirements.

See Step 3 - ADD 1 UNIT, similar.

2. EXAMPLE: ADDING ONE UNIT TO AN EXISTING BUILDING BY SUBDIVISION

To arrive at the cost of ADDING 1 UNIT to an existing structure, the rehabilitation cost tables were used as follows: It is assumed that the unit is rehabilitated at the time of subdivision. All kitchens and bathrooms are taken at cost configuration No. 4 and all other rooms at cost configurations 1, 2, or 3, depending on the condition state. In ADDING 1 UNIT a new kitchen and bathroom would have to be added either to the new unit or a unit from which it is being subdivided. Cost configuration 4 is equivalent to replacement. Estimated cost and scope of Demolition & Structural Change costs are listed in Table 4A. No exterior rehabilitation cost factor is added.

Step 1 - Sum Rooms/Unit by number and type.

Table	Room	Total Cost/Room (\$)		
		DYS	MIN	MAX
2A config 4	BATHROOM	\$ 600	\$1680	\$2350
2B config 4	KITCHEN	950	2680	4340
2C config 2	LIVING ROOM	85	350	410
2E config 2	BEDROOM	85	300	370
2F config 2	HALL, STOR, UTILITY	90	224	288
4A DS2	DEMOLITION, STRUCT. CHANGES	75	250	350
Table 5B		\$1885	\$5484	\$8108

Step 2 - Total cost of adding 1 Unit for a specific project area by field check or estimation, Single Family.

Hypothetical Cost, representing No of add 1 Unit's x cost/unit	\$60,000	\$75,000	\$ 90,000
Field check or estimate of the no. of occurrences of adding 1 room to building to accomodate adding 1 unit. Table 5C(a) X 10 occurrences	9,600	19,200	23,040
TOTAL	\$69,600	\$94,200	\$113,040

Step 3 - Total cost of adding 1 Unit for a specific project area
by field check or estimation, Multiple Family dwelling

Hypothetical Cost representing

No. of Add 1 Unit's x cost/unit \$60,000 \$75,000 \$ 90,000

Field Chest of Estimation of
occurences of:

	<u>Table 1G</u>	<u>Amt/Unit</u>		<u>Occurrences</u>			
	EX8	1000	1000	5	5,000	5,000	5,000
	EX9	1800	2200	3	5,400	5,400	6,600
(2flr)	EX40	150	150	4	600	600	600
	EX42	26	26	20	<u>520</u>	<u>520</u>	<u>520</u>
HYPOTHETICAL TOTAL COST/PROJECT AREA					\$71,520	\$86,520	\$102,720

3. EXAMPLE: COST OF MERGER & REHABILITATION

To arrive at the cost of MERGING ONE UNIT in an existing structure the rehabilitation cost tables were used as follows: All units were rehabilitated. The exterior cost factor was removed from the total cost/unit as given in Summary Table 5A. In 1-2 room units the kitchen was demolished at a cost of \$50.00. When merging to a 1-2 room unit the cost of demolishing the bathroom was included as \$75.00. In all mergers to units greater than 1-2 rooms, the bathroom was retained. In the 3-4 and 5-6 room units the kitchen was demolished at a cost of \$100.00 and replaced by the configuration 3 cost of a bedroom. The rehabilitation cost for the merged unit was taken as the sum of the cost of rehabilitating each unit minus the exterior cost factor. Table 5E lists the probable merger occurrences for rooms/unit and units/building. Because of code enforcement no do-it-yourself was considered in mergers.

Problem

Merge a 3-4 room unit into another 3-4 room unit, both units in condition state 2:

Step 1 - Sum the units and the merging conditions

	<u>Table 5A</u>		<u>Table 4A</u>		
3 Room Unit	\$1837	(-)	\$258	=	\$1579
4 Room Unit	1987	(-)	258	=	<u>1729</u>
					\$3308/2=\$1654
Cost for 1 unit	\$1654				
Cost for 1 unit	1654				
Add config 3 bedroom, Table 2E	545				
Subtract config 3 bedroom, Table 2E	-150				
Add demolition & structural change Table 4A	500				
	<hr/>				
TOTAL COST OF MERGER	\$4203			See Table 5D, 3-4/3-4, Condition 2, Contr Min.	

Step 2 - Total cost of merger & rehabilitation for a specific project area by field check or estimation, firecode and miscellaneous exterior requirements.

See Step 3 - ADD 1 UNIT, similar.

TABLE 1A
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

BATHROOM (B) (5 x 8) (40SF)

Item No.	Item	DYS	CONTR MIN	CONTR MAX
	<u>CARPENTRY</u>			
B1	Resheath Wls, Clg, 3/8" gyp bd.	\$15	\$ 30	\$ 40
B2	Remove Old Dr., New Dr & Hardware, Trim	20	50	70
B3	New Dr., Hardware, Trim, Old Frame	18	30	40
B4	New Window & Trim, Ext Flash, Patch	25	40	70
B5	Old Window, New trim	5	10	15
B6	New Vanity	40	80	150
B7	New Hardware - Old Door	10	18	20
	<u>FLOORING</u>			
B10	Sheet vinyl, waterproof backing Cove Base	15	25	35
B11	Ceramic tile floor, base	25	75	100
B12	Ceramic tile wainscot	35	100	125
	<u>ACCESSORIES</u>			
B15	Medicine Cabinet	25	25	80
B16	Mirror	12	12	40
B17	Paper Holder	5	5	8
B18	Soap & Grab	9	9	9
B19	Towel Bar	8	8	8
B20	Robe Hook	4	4	4
B21	Curtain Rod	10	8	8
B22	Tub Enclosure	40	80	80
B23	Glass Shelf	10	10	10
B24	Installation of above	-	20	40
	<u>PAINTING</u>			
B25	1 coat over existing (enamel)	2	30	40
B26	Patch + 2 coats enamel over existing	4	60	85
B27	2 coats enamel over new	5	50	75
	<u>PLUMBING</u> Repair Only Plumbing Repair, Ext Piping, Flt			
B30	Water Closet B30B B30A (100)	20	250(135)	310(195)
B31	Lavatory B31B B31A (75)	35	200(125)	250(175)
B32	Tub B32B B32A (80)	45	270(185)	370(285)

TABLE 1A (CONT'D)
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

BATHROOM (B) (5 x 8) (40SF)

Item No.	Item	DYS	CONTR MIN	CONTR MAX
	<u>ELECTRICAL</u>			
B35	1 duplex outlet	\$15	\$ 15	\$ 20
B36	1 light outlet + 1 light fixt.	20	25	40
B37	1 light switch	15	15	20
B38	1 electric heater (110V)	35	35	90
B39	1 vent fan, with ducts connected to light switch.	50	80	120

TABLE 1B
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

KITCHEN (K) (8 x 10) (80SF)

Item No.	Item	DYS	CNTR MIN	CNTR MAX
	<u>CARPENTRY</u>			
K1	Resheath walls, clg, 3/8" gypbd	\$ 25	\$ 60	\$ 70
K2	Remove old dr, new dr., hardware trim	20	50	70
K3	New door, hardware, trim, old frame	18	30	40
K4	New window & trim, ext flash, patch	25	40	70
K5	Old window, new trim	5	10	15
K6	New hardware, old door	10	18	20
	<u>CASEWORK</u>			
K10	Base & wall cabinets, counter top formica & splash, installed	320	600	1200
	<u>APPLIANCES</u> DYS-use K17 for K15,16,18.NoK23			
K15	Cooktop, built in	-	100	100
K16	Range/Oven Drop-in unit	-	220	250
K17	Range/Oven free standing	75	180	290
K18	Oven, built in	-	140	390
K19	Dishwasher	-	230	340
K20	Disposal	-	45	90
K21	Vent Hood	-	40	40
K22	Refrigerator	50	180	200
K23	Installation of appliances	-	60	120
	<u>FLOORING</u>			
K25	Vinyl-asb or linoleum	14	25	30
K26	Vinyl tile, rubber base	30	45	55
K27	Sheet vinyl, cove base	35	45	55
	<u>PAINTING</u>			
K30	1 coat enamel over existing	4	30	45
K31	Patch + 2 coats enamel over existing	8	45	60
K32	2 coats enamel over new	6	42	58
K33	Paint cabinets (existing)	6	30	60
	<u>PLUMBING</u> Repair only take DYS			
K35	Kitchen sink K35B K35A(70)	30	180(115)	240(135)
K36	Install Dishwasher	-	50	50
K37	Install Disposal	-	50	50

TABLE 1B (CONT'D)
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

KITCHEN (K) (8 x 10) (80SF)

Item No.	Item	DYS	CNTR MIN	CNTR MAX
	ELECTRICAL			
K40	2 duplex outlets, 1 switch	\$ 15	\$ 60	\$ 60
K41	1 light fixt, 1 fixt outlet	20	35	40
K42	6 outlets, 1 switch, 1 lt outlet & fixt.	150	175	185
K43	1 new 220V circuit	60	60	60
K44	2 new 220V circuits	120	120	120
K45	New 240 service	200	200	200
K46	1 new 110V circuit	30	35	35

TABLE 1C
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

LIVING ROOM (LR) (14 x 16) (224SF)

Item No.	Item	DYS	CNTR MIN	CNTR MAX
	<u>CARPENTRY</u>			
LR1	Resheath walls, clg, 3/8" gypbd	\$ 75	\$150	\$ 170
LR2	New trim, room	4	20	25
LR3	New door & hardware, trim, old frame	18	30	40
LR4	Remove old door, new door, hardware, trim	20	50	70
LR5	New window trim, ext flash, patch	45	80	100
LR6	New hardware, old door	10	18	20
LR7	Old window new trim	5	10	15
LR8	New fireplace (min: prefab), (Max: masonry)	450	700	1000
LR9	Rehabilitate old fireplace	50	200	300
	<u>FLOORING</u>			
LR10	Carpet	224	314	440
LR11	Vinyl tile	112	170	190
LR12	Hardwood, Oak (new)	45	112	124
LR13	Refinish hardwood floor	10	70	80
	<u>PAINTING</u>			
LR15	1 coat over existing	8	45	60
LR16	Patch + 2 coats over existing	18	130	150
LR17	2 coats over new	16	110	130
	<u>ELECTRICAL</u>			
LR20	4 duplex outlets, 1 switch	80	80	100
LR21	1 fixture	10	20	30
LR22	2 duplex outlets, 1 switch	50	50	60
LR23	1 240V circuit	60	60	60
LR24	New switch plates, 1 duplex outlet	25	25	25
	<u>HEATING</u>			
LR25	Forced air, 1 register	-	15	30
LR26	Dual wall unit ($\frac{1}{2}$ of unit)	-	70	80
LR27	Electric Heater	-	80	120

TABLE 1D
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

DINING ROOM (DR) (10 x 12) (120SF)

Item No.	Item	DYS	CNTR MIN	CNTR MAX
	<u>CARPENTRY</u>			
DR1	Resheath walls, clg, 3/8" gypbd	\$50	\$100	\$120
DR2	New trim, room	4	15	20
DR3	New door & hardware, trim, old frame	18	30	40
DR4	Remove old door, new door, hardware, trim	20	50	70
DR5	New window, trim, ext. patch	45	80	100
DR6	New hardware, old door	10	18	20
DR7	Old window, new trim	5	10	15
	<u>FLOORING</u>			
DR10	Vinyl-Asb tile or linoleum	25	50	55
DR11	Refinish hardwood floor	10	45	50
DR12	Vinyl tile, vinyl base	72	100	110
DR13	New hardwood floor	25	60	70
	<u>PAINTING</u>			
DR15	1 coat over existing	5	30	45
DR16	Patch + 2 coats over existing	12	90	120
DR17	2 coats over new	10	80	100
	<u>ELECTRICAL</u>			
DR20	3 duplex outlets, 1 switch	60	70	80
DR21	1 light fixture	15	25	50
DR22	1 duplex outlet, 1 switch	15	30	40
DR23	1-240V circuit	60	60	60
DR24	New switch plates, 1 duplex outlet	25	25	25
	<u>HEATING</u>			
DR25	1 register, forced air	-	15	30
DR26	Electric heater	-	80	120

TABLE 1E
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

BEDROOM (BR) (12 x 14) (168SF)

Item No	Item	DYS	CNTR MIN	CNTR MAX
	<u>CARPENTRY</u>			
BR1	Resheath walls, clg, 3/8" gypbd	\$ 65	\$120	\$130
BR2	New trim, room	4	15	20
BR3	New door & hardware, trim, old frame	18	30	40
BR4	Remove old door, new door, hardware, trim	20	50	70
BR5	New window, trim, ext.	45	80	100
BR6	New hardware, old door	10	18	20
BR7	Old window, new trim	5	10	15
BR8	New shelf, pole, closet	8	15	25
BR9	New closet doors	40	75	100
	<u>FLOORING</u>			
BR10	Carpet	168	235	336
BR11	Hardwood	40	90	110
BR12	Vinyl	90	120	140
BR13	Vinyl-asb	40	65	70
BR14	Refinish hardwood	10	50	60
	<u>PAINTING</u>			
BR20	1 coat over existing	8	40	55
BR21	Patch + 2 coats over existing	18	110	140
BR22	2 coats over new	16	100	130
	<u>ELECTRICAL</u>			
BR25	2 duplex outlets, 1 switch	45	45	60
BR26	1 light fixture	10	15	25
BR27	1 duplex outlet	15	15	20
BR28	1-240V circuit	60	60	60
BR29	New switch plates, 1 duplex outlet	25	25	25
	<u>HEATING</u>			
BR30	Forced air, 1 register	-	15	30
BR31	Dual "wall" unit (½ unit)	-	70	80
BR32	Electric heater	-	80	120

TABLE 1F
REHABILITATION COSTS

DOLLAR COST OF ITEMS BY ROOM

HALLS, UTILITY, STORAGE (HUS) a: (80SF) b: (160SF)

Item No.	Item	DYS	CNTR MIN	CNTR MAX
	<u>CARPENTRY</u>			
HUS1	Resheath 3/8" gypbd a)	\$42	\$ 75	\$ 84
	b)	80	144	160
HUS2	1 new door & hardware a & b	18	30	40
HUS3	1 old door, new hardware a & b	10	18	20
HUS4	New trim a)	3	10	14
	b)	5	18	26
HUS5	1 new shelf & pole a & b	8	15	25
HUS6	5 new shelves a & b	12	24	36
	<u>FLOORING</u> (Including Base)			
HUS10	Vinyl asb/linoleum a)	24	40	46
	b)	45	78	86
HUS11	Vinyl tile a)	48	68	78
	b)	93	134	150
HUS12	New hardwood a)	38	52	62
	b)	53	102	118
HUS13	Refinish hardwood a)	18	36	46
	b)	33	70	86
	<u>PAINTING</u>			
HUS15	Patch + cover existing a)	4	34	42
	b)	9	64	80
HUS16	2 coats over new a)	10	64	84
	b)	20	84	160
	<u>ELECTRICAL</u>			
HUS20	1 new light outlet & fixture a & b	25	30	35
HUS21	1 new duplex outlet a & b	15	20	20
HUS22	1 new 110V circuit a & b	30	35	35
	<u>PLUMBING</u> (Installed)			
HUS25	1 new laundry tub a & b	20	140(100)	200(150)
HUS26	1 new washer a & b	50	230(170)	435(350)
HUS27	1 new clothes dryer a & b	50	190(130)	360(300)

TABLE 1C
REHABILITATION COSTS

DOLLAR COST OF ITEMS FOR
BUILDING EXTERIOR, PUBLIC
CIRCULATION AND LOBBY

Item No	Item	DYS	CNTR MIN	CNTR MAX
	<u>CARPENTRY</u>			
EX1	Repair, porch, stair, etc.	\$ 40	\$ 150	\$ 300
EX2	New porch, stair, minimum deck	125	300	600
EX3	Repair sills, studs, etc for rot, termite	50	150	300
EX4	Repair siding	50	100	200
EX5	New 1 hr passage, 3'-6"x40'-0"	75	150	185
EX6	New fire door at roof	60	85	100
EX7	New rear stair	200	400	700
EX8	New 2 story fire escape	-	1000	1300
EX9	New 3 story fire escape	-	1600	2200
EX10	Fence repair	50	100	150
EX11	New foundation, partial	150	500	1000
EX12	New ratproofing	75	100	150
*See attached sheet				
	<u>ROOFING</u>			
EX15	New overall major repairs repair roof, gutters, etc. 1 & 2-4 units	75	400	750
EX16	New overall major repairs repair roof, gutters , 5+ units	150	600	1000
EX17	Minor roof repair, gutters	25	100	200
	<u>MISCELLANEOUS</u>			
EX20	Debris removal	20	40	100
EX22	New garbage chute 5+ units	400	400	1000
	<u>PAINTING</u>			
EX25	2 coats-single family	30	300	600
EX26	2 coats- 2 to 4 units	50	450	900
EX27	2 coats- 5 plus units	85	780	1560
	<u>ELECTRICAL</u>			
EX28	New service entrance	200/unit	200/unit	250/unit
EX29	New light outlet & fixt.	30	30	40
EX30	New branch circuits, 110V to apt. circuits	60	60	60

TABLE 1G (CONT'D)
REHABILITATION COSTS

DOLLAR COST OF ITEMS FOR
BUILDING EXTERIOR, PUBLIC
CIRCULATION AND LOBBY

Item No	Item	DYS	CNTR MIN	CNTR MAX
	<u>PLUMBING</u>			
EX35	New hot water heater x2 (2-4) x4 (5+)	\$ 80	\$ 115	\$ 350
EX36	New sprinkler heads to house main, garbage chute and store rooms 5+ units	40	40/head	45/head
EX40	New fire alarm system - manual	75/flr	75/flr	75/flr
EX41	New automatic alarm detector system	20/head	20/head	30/head
EX42	New fire extinguishers 2- $\frac{1}{2}$ gal.	26	26	26
	<u>MECHANICAL</u>			
EX45	New 95,000 Btu furnace, forced air	-	620	830
EX46	Repair existing furnace	-	100	350

***See attached sheet

REHABILITATION COSTS

*DOLLAR COST OF ITEMS FOR
BUILDING EXTERIOR, PUBLIC
CIRCULATION AND LOBBY

Item No	Item	DYS	CNTR MIN	CNTR MAX
EX13A	Resheath interior corridor & lobby 3/8 gypbd 2-4 units (4 unit)	\$135	\$270	\$ 300
EX13B	Resheath interior corridor & lobby 3/8 gypbd 5+ units (15 units)	450	900	1000
EX14A	New vinyl tile flooring 2-4 units (4 unit)	125	175	200
EX14B	New vinyl tile flooring 5+ units (15 unit)	650	910	1040

REHABILITATION COSTS

***DOLLAR COST OF ITEMS FOR
BUILDING EXTERIOR, PUBLIC
CIRCULATION AND LOBBY

Item No	Item	DYS	CNTR MIN	CNTR MAX
	<u>PAINTING (INTERIOR)</u> Lobby/Corridor			
EX50	1 coat over existing 2-4	\$ 15	\$120	\$150
EX51	1 coat over existing 5+	50	400	500
EX52	2 coats over new 2-4	30	180	225
EX53	2 coats over new 5+	100	600	750

TABLE 2A
REHABILITATION COSTS

ROOM COST/CONFIGURATION

BATHROOM

CONFIGURATION ONE

(B5, B7, B10, B15, B17, B18, B19, B21, B24, B25, B30B, B31B, B32B, B35)

Essentially a paint job, new flooring, repair fixtures, minimum electrical.

	DYS	CNTR MIN	CNTR MAX
	\$200	\$270	\$380
+ 20% overhead profit	-	54	75
TOTAL	\$200	\$324	\$455

CONFIGURATION TWO

(B3, B5, B10, B15, B17, B18, B19, B20, B24, B26, B30B, B31B, B32B, B35, B36, B37)

Essentially a patch and paint job, minor replacement, repair fixtures, medium electrical.

	DYS	CNTR MIN	CNTR MAX
	\$250	\$355	\$500
+ 20% overhead profit	-	70	100
TOTAL	\$250	\$425	\$600

CONFIGURATION THREE

(B1, B3, B5, B10, B12, B15, B17, B18, B19, B20, B21, B24, B27, B30A, B31A, B32B, B35, B36, B37)

Resheath interior, install new fixtures and paint with medium electrical and medium facilities.

	DYS	CNTR MIN	CNTR MAX
	\$445	\$800	\$1200
+20% overhead profit	-	160	240
TOTAL	\$445	\$960	\$1440

CONFIGURATION FOUR

(B1, B2, B4, B6, B11, B12, B15, B17, B18, B19, B20, B22, B24, B27, B30, B31, B32, B35, B36, B37, B38) Note: DYS B30A, B31A, B32A.

Resheath interior, install new fixtures with considerable pipe replacement, paint, full electrical, full facilities.

	DYS	CNTR MIN	CNTR MAX
	\$600	\$1400	\$1960
+20% overhead profit	-	280	390
TOTAL	\$600	\$1680	\$2350

TABLE 2B
REHABILITATION COSTS

ROOM COST/CONFIGURATION

KITCHEN

CONFIGURATION ONE

(K6, K17, K22, K27, K30, K33, K35B, K40, K41)

Essentially a paint job, new flooring, some fixture repair, new range and refrigerator, minimal electrical work, no new cabinets.

	DYS	CNTR MIN	CNTR MAX
	\$245	\$608	\$800
+ 20% overhead profit	-	122	160
TOTAL	\$245	\$730	\$960

CONFIGURATION TWO

(K3, K5, K10, K16, K21, K22, K23, K27, K31, K35A, K40, K41, K43)

Essentially a patch and paint job, new cabinets, new built in range/oven, new refrigeration, vent hood, new sink, minimal plumbing repair and medium electrical.

	DYS	CNTR MIN	CNTR MAX
	\$640	\$1500	\$2275
+ 20% overhead profit	-	360	455
TOTAL	\$640	\$1860	\$2730

CONFIGURATION THREE

(K1, K3, K5, K10, K16, K21, K22, K23, K27, K32, K35A, K42, K43)

Resheath interior, install new cabinets and appliances, new sink minimal plumbing repair, considerable electrical.

	DYS	CNTR MIN	CNTR MAX
	\$820	\$1640	\$2430
+ 20% overhead profit	-	330	490
TOTAL	\$820	\$1970	\$2920

CONFIGURATION FOUR

(K1,K2,K4,K10,K15,K18, K19, K20, K21, K22, K23, K27, K32, K35A, K36, K37, K42, K44, K46, K46, K45) For DYS no K45.

Resheath interior, install new cabinets, all appliances, considerable electrical, new 240 service, considerable window door replacement.

	DYS	CNTR MIN	CNTR MAX
	\$950	\$2230	\$3615
+ 20% overhead profit	-	450	725
TOTAL	\$950	\$2680	\$4340

TABLE 2C
REHABILITATION COSTS

ROOM COST/CONFIGURATION

LIVING ROOM

CONFIGURATION ONE

(LR6, LR6, LR13, LR15, LR24)

Essentially a minimum paint job, refinish flooring and minor electrical.

	DYS	CNTR MIN	CNTR MAX
	\$65	\$175	\$200
+ 20% overhead profit	-	35	40
TOTAL	\$65	\$210	\$240

CONFIGURATION TWO

(LR2, LR3, LR6, LR13, LR16, LR24)

Patch and paint job, refinish flooring, minor electrical.

	DYS	CNTR MIN	CNTR MAX
	\$85	\$290	\$340
+ 20% overhead profit	-	60	70
TOTAL	\$85	\$350	\$410

CONFIGURATION THREE

(LR1, LR2, LR3, LR7, LR13, LR17, LR22, LR25)

Resheath room, refinish floor, door and window repair, paint, minor electrical, some heating repair/replacement.

	DYS	CNTR MIN	CNTR MAX
	\$180	\$455	\$550
+ 20% overhead profit	-	90	120
TOTAL	\$180	\$545	\$670

CONFIGURATION FOUR

(LR1, LR2, LR4, LR5, LR8, LR10, LR17, LR22, LR26)

Resheath room, door and window replacement, minor electrical, new dual wall heating unit, carpet, fireplace.

	DYS	CNTR MIN	CNTR MAX
	\$880	\$1540	\$2075
+ 20% overhead profit	-	310	415
TOTAL	\$880	\$1850	\$2490

TABLE 2D
REHABILITATION COSTS

ROOM COST/CONFIGURATION

DINING ROOM

CONFIGURATION ONE

(DR6, DR11, DR15, DR24)

A minimum paint job, refinish flooring and minor electrical

	DYS	CNTR MIN	CNTR MAX
	\$50	\$118	\$140
+ 20% overhead profit	-	24	28
TOTAL	\$50	\$142	\$168

CONFIGURATION TWO

(DR2, DR3, DR11, DR16, DR24)

Patch and paint job, refinish flooring, minor electrical

	DYS	CNTR MIN	CNTR MAX
	\$70	\$205	\$255
+ 20% overhead profit	-	41	51
TOTAL	\$70	\$246	\$306

CONFIGURATION THREE

(DR1, DR2, DR3, DR7, DR11, DR17, DR22, DR25)

Resheath room, refinish floor, door and window repair, paint, minor electrical, some heating repair/replacement.

	DYS	CNTR MIN	CNTR MAX
	\$112	\$325	\$400
+ 20% overhead profit	-	65	80
TOTAL	\$112	\$390	\$480

CONFIGURATION FOUR

(DR1, DR2, DR4, DR5, DR13, DR17, DR22, DR25)

Resheath room, door and window replacement, minor electrical, new dual wall heating unit, new hardwood floor or extensive replacement and refinishing, minor electrical, some heating repair/replacement.

	DYS	CNTR MIN	CNTR MAX
	\$170	\$440	\$550
+ 20% overhead profit	-	90	110
TOTAL	\$170	\$530	\$660

TABLE 2E
REHABILITATION COSTS

COST OF ITEMS BY ROOM

BEDROOM

CONFIGURATION ONE

(BR6, BR14, BR20, BR27)

A minimum paint job, refinish hardwood flooring, minor electrical.

	DYS	CNTR MIN	CNTR MAX
	\$45	\$125	\$155
+ 20% overhead profit	-	25	31
TOTAL	\$45	\$150	\$186

CONFIGURATION TWO

(BR2, BR3, BR6, BR14, BR21, BR29)

Patch and paint job, refinish flooring, minor electrical.

	DYS	CNTR MIN	CNTR MAX
	\$85	\$250	\$305
+ 20% overhead profit	-	50	65
TOTAL	\$85	\$300	\$370

CONFIGURATION THREE

(BR1, BR2, BR3, BR7, BR14, BR8, BR9, BR22, BR25, BR30)

Resheath room, refinish floor, door and window repair, new closet doors and pole, shelf, minor electrical, some heating repair-replacement.

	DYS	CNTR MIN	CNTR MAX
	\$210	\$465	\$595
+ 20% overhead profit	-	80	120
TOTAL	\$210	\$545	\$715

CONFIGURATION FOUR

(BR1, BR2, BR4, BR5, BR8, BR9, BR11, BR22, BR25, BR31)

Resheath room, door and window replacement, medium electrical, new dual wall heating unit ($\frac{1}{2}$), new hardwood floor or extensive replacement or refinishing.

	DYS	CNTR MIN	CNTR MAX
	\$245	\$570	\$825
+ 20% overhead profit	-	115	165
TOTAL	\$245	\$685	\$990

TABLE 2F
REHABILITATION COSTS

COSTS OF ITEMS BY ROOM

HALLS, UTILITY, STORAGE

a: No Utility Room
3-4

b: Utility Room
5-6 & 3 & 4 SF

CONFIGURATION ONE

a: (HUS3, HUS13, HUS15, HUS20, HUS21)

b: (HUS3, HUS3, HUS3, HUS13, HUS15, HUS20, HUS20, HUS21, HUS21)

(Note: In CNTR MAX b(1) use only 2-HUS3)

A minimum paint job, refinish hardwood flooring, minor electrical.

	DYS		CNTR MIN		CNTR MAX	
	a	b	a	b	a	b(1)
	\$ 72	\$152	\$138	\$290	\$163	\$316
+ 20% overhead profit	-	-	27	60	33	64
TOTAL	\$ 72	\$152	\$165	\$350	\$196	\$380

CONFIGURATION TWO

a: (HUS4, HUS2, HUS13, HUS16, HUS20, HUS21)

b: (HUS4, HUS2, HUS3, HUS13, HUS16, HUS20, HUS20, HUS21, HUS21)

Patch and paint job, refinish flooring, minor electrical.

	DYS		CNTR MIN		CNTR MAX	
	a	b	a	b	a	b
	\$ 90	\$165	\$190	\$320	\$240	\$440
+ 20% overhead profit	-	-	34	64	48	88
TOTAL	\$ 90	\$165	\$224	\$384	\$288	\$528

CONFIGURATION THREE

a: (HUS1, HUS2, HUS4, HUS13, HUS16, HUS20, HUS21, HUS21)

b: (HUS1, HUS2, HUS3, HUS4, HUS13, HUS16, HUS20, HUS20, HUS21, HUS22)

Resheath walls, refinish floor at utility replace vinyl or vinyl-asb, door repair, new washer and dryer at utility, medium electrical.

	DYS		CNTR MIN		CNTR MAX	
	a	b	a	b	a	b
	\$146	\$294	\$285	\$480	\$342	\$618
+ 20% overhead profit	-	-	57	95	68	122
TOTAL	\$146	\$294	\$342	\$575	\$410	\$740

TABLE 2F (CONT'D)
REHABILITATION COSTS

COSTS OF ITEMS BY ROOM

HALLS, UTILITY, STORAGE

a: No Utility Room
3-4

b: Utility Room
5-6 & 3 & 4 SF

CONFIGURATION FOUR

- a: (HUS1, HUS2, HUS4, HUS5, HUS6, HUS12, HUS16, HUS20, HUS21, HUS22)
b: (HUS1, HUS2, HUS3, HUS4, HUS5, HUS6, HUS12, HUS16, HUS20, HUS21, HUS22, HUS25A, HUS26A, HUS27A).

Resheath walls, new floor or considerable repair and replacement,
new doors, considerable repair of plumbing and new washer, dryer,
laundry tub at utility room, considerable electrical.

	DYS		CNTR MIN		CNTR MAX	
	a	b	a	b	a	b
	\$200	\$266	\$364	\$500	\$ 890	\$1510
+ 20% overhead profit	-	-	72	100	180	300
TOTAL	\$200	\$266	\$436	\$600	\$1070	\$1810

TABLE 2C
REHABILITATION COSTS

EXTERIOR COST/CONFIGURATION

CONFIGURATION ONE

SF (EX1, EX10, EX20, EX25)
2-4 (EX1, EX10, EX20, EX26, EX50)
5+ (EX1, EX10, EX20, EX27, EX51)

Paint exterior, minimum paint lobby, corridor, minor repairs, and debris removal.

	DYS			CNTR MIN			CNTR MAX		
	SF	2-4	5+	SF	2-4	5+	SF	2-4	5+
	\$140	\$175	\$225	\$590	\$ 860	\$1470	\$1150	\$1600	\$2610
+ 20% over-head profit	-	-	-	120	173	290	230	320	530
TOTAL	\$140	\$175	\$225	\$710	\$1033	\$1760	\$1380	\$1920	\$3140

CONFIGURATION TWO

SF (EX1, EX4, EX10, EX15, EX17, EX20, EX25, EX29, EX28, EX35)
2-4 (EX1, EX4, EX10, EX17, EX20, EX26, EX29, EX29, EX28, EX35, EX42, EX42, EX52)
5+ (EX1, EX4, EX10, EX17, EX20, EX27, EX28, EX29, EX29, EX30, EX35, EX42, EX42, EX42, EX53)

Paint exterior, lobby and corridor 2 coat paint job, minor roof repair, minor repairs, debris removal, minor electrical, new service entrance, fire extinguishers, new hot water heaters.

	DYS			CNTR MIN			CNTR MAX		
	SF	2-4	5+	SF	2-4	5+	SF	2-4	5+
	\$600	\$860	\$1530	\$1535	\$2260	\$5522	\$2940	\$3890	\$ 8600
+ 20% over-head profit	-	-	-	315	460	1128	560	770	1700
TOTAL	\$600	\$860	\$1530	\$1850	\$2720	\$6650	\$3500	\$4660	\$10300

CONFIGURATION THREE

SF (EX2, EX3, EX4, EX11, EX15, EX20, EX25, EX28, EX29, EX30, EX35)
2-4 (EX2, EX3, EX4, EX11, EX15, EX20, EX26, EX28, EX29, EX29, EX30, EX35, EX40, EX42, EX42, EX13A, EX14A, EX52)
5+ (EX2, EX3, EX4, EX11, EX16, EX20, EX22, EX27, EX28, EX29, EX29, EX29, EX29, EX30, EX35, EX40, EX42, EX42, EX42, EX36, EX36, EX13B, EX14B, EX53)

TABLE 2G (CONT'D)
REHABILITATION COSTS

EXTERIOR COST/CONFIGURATION

CONFIGURATION THREE (CONT'D)

Paint exterior, lobby and corridor, resheath lobby & corridor, roof repairs, new fire extinguishers, debris removal, service entrance and minor electrical, new hot water heaters, in 5+ units new manual fire alarm system, new garbage chute.

	DYS			CNTR MIN			CNTR MAX		
	SF	2-4	5+	SF	2-4	5+	SF	2-4	5+
	\$870	\$2170	\$6100	\$2195	\$3517	\$ 9305	\$4250	\$6565	\$14300
+20% over-	-	-	-	435	733	1895	850	1335	2900
head profit									
TOTAL	\$870	\$2170	\$6100	\$2630	\$4250	\$11200	\$5100	\$7900	\$17200

TABLE 3A

COST/SQUARE FOOT BATHROOM

	DYS	CNTR MIN	CNTR MAX
CONFIG ONE	\$ 5.00	\$ 8.10	\$11.40
CONFIG TWO	6.25	10.00	15.00
CONFIG THREE	11.10	24.00	37.00
CONFIG FOUR	15.00	42.00	58.75

TABLE 3B

COST/SQUARE FOOT KITCHEN

	DYS	CNTR MIN	CNTR MAX
CONFIG ONE	\$ 3.30	\$ 9.10	\$12.00
CONFIG TWO	8.00	23.30	34.10
CONFIG THREE	10.25	24.60	37.50
CONFIG FOUR	11.90	33.30	54.10

TABLE 3B1

KITCHENETTE (20SF) (2'-6" x 8'0")

ASSUME COST/SF AS IN TABLE 3B SEE COST/KITCHENETTE BELOW

	DYS	CNTR MIN	CNTR MAX
CONFIG ONE	\$ 66	\$182	\$240
CONFIG TWO	160	466	682
CONFIG THREE	205	492	750
CONFIG FOUR	238	666	820

TABLE 3C

COST/SQUARE FOOT LIVING ROOM

	DYS	CNTR MIN	CNTR MAX
CONFIG ONE	\$0.29	\$0.94	\$ 1.07
CONFIG TWO	0.38	1.56	1.83
CONFIG THREE	0.80	2.44	5.60
CONFIG FOUR	3.92	8.25	11.00

TABLE 3D

COST/SQUARE FOOT DINING ROOM

	DYS	CNTR MIN	CNTR MAX
CONFIG ONE	\$0.43	\$1.18	\$1.40
CONFIG TWO	0.58	2.05	2.55
CONFIG THREE	0.93	3.25	4.00
CONFIG FOUR	1.42	4.40	5.50

TABLE 3E

COST/SQUARE FOOT BEDROOM

	DYS	CNTR MIN	CNTR MAX
CONFIG ONE	\$0.38	\$1.25	\$1.30
CONFIG TWO	0.71	2.50	3.08
CONFIG THREE	1.75	4.65	5.95
CONFIG FOUR	2.04	5.70	8.25

TABLE 3F

COST/SQUARE FOOT HALLS, UTILITY, STORAGE

	DYS		CNTR MIN		CNTR MAX	
	a	b	a	b	a	b
CONFIG ONE	\$.90	\$.95	\$2.06	\$2.20	\$ 2.45	\$ 2.37
CONFIG TWO	1.12	1.03	2.80	2.40	3.60	3.30
CONFIG THREE	1.84	1.84	4.30	3.60	5.12	4.60
CONFIG FOUR	2.50	1.66	5.45	3.75	13.40	11.30

TABLE 3G

COST PER UNIT FACTOR FOR EXTERIOR REHABILITATION

	DYS			CNTR MIN			CNTR MAX		
	SF	2-4	5+	SF	2-4	5+	SF	2-4	5+
CONFIG 1	\$140	\$ 44	\$ 15	\$ 710	\$ 258	\$417	\$1380	\$ 480	\$ 210
CONFIG 2	600	215	1102	1850	680	443	4660	1170	686
CONFIG 3	870	543	405	2630	1060	750	5100	1980	1070

SF Dwelling = Ext. Cost

2-4 Units = $\frac{\text{Ext. Cost}}{4}$ (4 unit building assumed)5+ Units = $\frac{\text{Ext. Cost}}{15}$ (15 unit building assumed)

TABLE 4A

MINOR DEMOLITION & STRUCTURAL CHANGE COSTS AND OR MINIMUM EXTERIOR WORK
TO ACCOMMODATE NEW UNIT FOR ADD 1 UNIT (SUBDIVISION)

Item No	Item	DYS	CNTR MIN	CNTR MAX
DS1	1-2 RM UNIT	\$ 50	\$150	\$250
DS2	3-4 RM UNIT	75	250	350
DS3	5-6 RM UNIT	100	400	500
DS4	7+ RM UNIT	-	500	800

NOTES

- A. SINGLE FAMILY DWELLING ADD 1 UNIT, ADD NEW CONSTRUCTION ROOM
(12 x 16) (192SF)
- B. EXTERIOR FRAME, SIDING ROOF, FOUNDATIONS AT \$5.00SF= \$ 960 DYS
EXTERIOR FRAME, SIDING ROOF, FOUNDATIONS AT \$10.00SF=\$1,920 CNTR MIN
EXTERIOR FRAME, SIDING ROOF, FOUNDATIONS AT \$12.00SF=\$2,304 CNTR MAX

TABLE 5A

SUMMARY TABLE OF REHABILITATION COSTS PER UNIT + ADDITIVE FACTOR FOR EXTERIOR

BLDG TYPE	UNIT TYPE	RMS/ UNIT	CONDITION 1									
			FROM	2			3			4		
				CONFIG 1			CONFIG 2			CONFIG 3		
				DYS	MIN	MAX	DYS	MIN	MAX	DYS	MIN	MAX
	STUDIO 1 RM	1-2		\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
	STUDIO 2 RM	1-2		-	-	-	-	-	-	-	-	-
SF	1BR-K-LR	3-4		847	2474	3601	1825	5169	9298	2819	7225	11585
	2BR-K-LR	3-4		892	2624	3787	1910	5469	9668	3029	7770	12300
	3BR-K-LR	5-6		937	2774	3973	1995	5769	10038	3239	8315	13015
	4BR-K-LR or	5-6		987	2916	4141	2065	6015	10408	3351	8705	13495
	3BR-DR-K-LR											
2-4	STUDIO 1 RM	1-2		375	974	1193	710	1921	2862	1373	3057	4840
	STUDIO 2 RM	1-2		420	1124	1379	795	2221	3232	1583	3602	5555
	1BR-K-LR	3-4		671	1837	2517	1365	3839	5568	2344	5422	8135
	2BR-K-LR	3-4		716	1987	2703	1450	4139	5938	2554	5967	8850
	3BR-K-LR	5-6		841	2322	3074	1610	4599	6548	2912	6745	9895
	4BR-K-LR or	5-6		891	2464	3242	1695	4845	6854	3024	7135	10375
	3BR-DR-K-LR											
5+	STUDIO 1 RM	1-2		346	833	1145	597	1684	2378	1235	2747	3930
	STUDIO 2 RM	1-2		391	983	1331	682	1984	2748	1445	3292	4645
	1BR-K-LR	3-4		642	1696	2247	1252	3602	5084	2206	5112	7225
	2BR-K-LR	3-4		687	1846	2433	1337	3902	5454	2416	5657	7940
	3BR-K-LR	5-6		812	2181	2803	1497	4362	6064	2774	6435	8985
	4BR-K-LR or	5-6		862	2323	2971	1582	4768	6370	2886	6825	9465
	3BR-DR-K-LR											

NOTES

- A. Bathroom is included in all units, but is not counted as a room.
- B. Studio includes kitchenette 20SF, which is not counted as a room.

TABLE 5B

SUMMARY TABLE OF 1 UNIT COSTS BY SUBDIVIDING EXISTING FACILITIES (APPROXIMATE METHOD)

BLDG TYPE	UNIT TYPE	RMS/ UNIT	CONDITION 1											
			FROM		2			3			4			
					DYS	MIN	MAX	DYS	MTN	MAX	DYS	MIN	MAX	
SF 2-4 & 5+	STUDIO 1 RM	1-2	\$ 953	\$2706	\$3438	\$ 973	\$2846	\$3830	\$1068	\$3041	\$ 4090			
	STUDIO 2 RM	1-2	998	2856	3624	1180	3146	4200	1278	3586	4805			
	1BR-K-LR	3-4	1807	5135	7662	1885	5484	8108	2161	6042	8835			
	2BR-K-LR	3-4	1852	5285	7848	1970	6784	8478	2371	6487	9550			
	3BR-K-LR	5-6	2002	5770	8369	2157	6394	9238	2754	7515	10745			
	4BR-K-LR or	5-6	2052	5912	8537	2240	8000	9544	2866	7905	11225			
	3BR-DR-K-LR													

NOTES

A. For ADD 1 UNIT all kitchens and bathrooms are taken at CONFIGURATION 4. All other rooms CONFIGURATION 1, 2 or 3 as appropriate.

B. For ADD 1 UNIT it is assumed no exterior rehabilitation takes place.

C. See TABLE 5C.

TABLE 5C

SUMMARY TABLE OF TRANSFORMATION OF BUILDING TYPES BY ADDING ONE OR MORE UNITS

TO FROM	SF	2-4	5+
SF		a.	
2-4		b.	b.
5+			

- a. In project areas where single family housing is small in size add the following extra costs per unit for adding a 1 room addition to the building to accomodate a portion of the added unit.

12 x 16 (192SF)		COST/SF	TOTAL
Exterior frame,	DYS	\$ 5 SF	960
siding, roofing,	CNTR MIN	10 SF	1,920
foundations	CNTR MAX	12 SF	2,304

These total costs should be added to the total project cost as a separate item after field inspection of the project area.

- b. In project areas where there are conversions which transform a building from 2 to 4 units to 8+ units the total project cost should take into consideration exit and fire protection requirements peculiar to the structures in the area. These costs should be added as a separate cost to the total project cost. See TABLE 1G, Items EX40, EX41, EX42, EX8, EX9.

TABLE 5D

SUMMARY TABLE OF MERGER AND REHABILITATION COSTS

MERGERS	FROM TO	CONDITION 1									
		1		2		3		4			
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1-2/1-2	(1-2)	\$ 670	\$ -	\$2997	\$ -	\$3452	\$ -	\$ 5200	\$ -		
	(3-4)										
1-2/3-4	(3-4)	745	-	3190	-	4345	-	7645	-		
	(5-6)										
1-2/5-6	(5-6)	745	1015	3671	4499	6178	9423	8890	12337		
	(7+)										
3-4/3-4	(5-6)	895	1165	4203	5425	7507	10331	10165	14184		
	(7+)										
3-4/5-6	(7+)	895	1165	4684	5973	8243	11279	11410	15780		
5-6/5-6	(7+)	1045	1315	5315	6671	9129	12377	12805	17525		

A. See TABLE 5E

B. Criteria

1. All units rehabilitated.
2. Kitchen demolished & replaced by CONFIG 3 of bedroom, demolition cost \$100.00.
3. 1-2 kitchen demolished \$50.00.
4. Bath demolished \$75.00.
5. Hall/Room partition-structural demolition/replacement changes, see TABLE 4A.
6. Rehabilitation cost for merged unit is the addition of cost for each unit merged.
7. Cost of unit is average of both sizes per unit category.

TABLE 5E

SUMMARY TABLE FOR TRANSFORMATION OF BUILDING TYPES BY MERGING ONE OR MORE UNITS

TO FROM	SF	2-4	5+
SF			
2-4	3-4/3-4 1-2/5-6 5-6/5-6 3-4/5-6	1-2/1-2 1-2/3-4 1-2/5-6 3-4/3-4	
5+		1-2/1-2 1-2/3-4 3-4/3-4	1-2/5-6 1-2/1-2 1-2/3-4

